

[FIG.1]

TRANSMIT POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

5 TRANSMISSION #2

(RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

10

[FIG.2]

ACK/NACK SIGNAL

CQI SIGNAL

PACKET TRANSMISSION CONTROL SIGNAL

15 PACKET DATA

DL TPC COMMAND

DEDICATED DATA CONTROL SIGNAL

COMMON CONTROL DATA

(CPICH, ETC.)

20 UL TPC COMMAND

CONTROL SIGNAL (DL TPC COMMAND)

(CQI, ACK/NACK, ETC.)

RECEIVED DATA

151 SCHEDULER

25 HS-SCCH SIGNAL

152 BUFFER (QUEUE)

UL TPC

153 MODULATION SECTION

157 MODULATION SECTION
 162 MODULATION SECTION
 107 TPC COMMAND GENERATION SECTION
 OFFSET SIGNAL
 5 160 TRANSMIT POWER CONTROL SECTION
 154 TRANSMIT POWER CONTROL SECTION
 158 TRANSMIT POWER CONTROL SECTION
 163 TRANSMIT POWER CONTROL SECTION
 106 SIR MEASURING SECTION
 10 105 SEPARATION SECTION
 104 DEMODULATION SECTION
 166 TRANSMISSION RF SECTION
 103 RECEPTION RF SECTION

 15 [FIG.3]
 203 RECEPTION RF SECTION
 UL TPC COMMAND
 257 TRANSMIT POWER CONTROL SECTION
 258 TRANSMISSION RF SECTION
 20 204 BUFFER
 205 DEMODULATION SECTION (HS-SCCH)
 208 DEMODULATION SECTION (DPCH)
 212 CIR MEASURING SECTION
 206 DEMODULATION SECTION (HS-PDSCH)
 25 210 SIR MEASURING SECTION
 213 CQI GENERATION SECTION
 252 MODULATION SECTION
 253 MODULATION SECTION

255 MODULATION SECTION
207 ERROR DETECTION SECTION
209 SEPARATION SECTION
211 TPC COMMAND GENERATION SECTION
5 CQI SIGNAL
ACK/NACK SIGNAL
TRANSMISSION DATA
DL TPC COMMAND
RECEIVED PACKET DATA
10 ACK/NACK SIGNAL
RECEIVED DATA
UL TPC COMMAND
DL TPC COMMAND

15 [FIG.4]
ACK/NACK SIGNAL
CQI SIGNAL
PACKET TRANSMISSION CONTROL SIGNAL
301 TRANSMISSION DESTINATION DETERMINING SECTION
20 TO BUFFER 152
302 MCS DETERMINING SECTION
TO MODULATION SECTION 153
303 TRANSMIT POWER DETERMINING SECTION
TO TRANSMIT POWER CONTROL SECTION 154
25 304 HS-SCCH SIGNAL GENERATION SECTION
TO AMPLIFICATION SECTION 161

[FIG.5]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

TRANSMISSION #2

5 (RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

10 [FIG.6]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

TRANSMISSION #2

15 (RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

20 [FIG.7]

ACK/NACK SIGNAL

CQI SIGNAL

PACKET TRANSMISSION CONTROL SIGNAL

301 TRANSMISSION DESTINATION DETERMINING SECTION

25 TO BUFFER 152

302 MCS DETERMINING SECTION

TO MODULATION SECTION 153

305 CQI DIFFERENCE CALCULATION SECTION

303 TRANSMIT POWER DETERMINING SECTION
TO TRANSMIT POWER CONTROL SECTION 154
304 HS-SCCH SIGNAL GENERATION SECTION
TO AMPLIFICATION SECTION 161

5

[FIG.8]

DOWNLINK QUALITY

TRANSMISSION #1

(INITIAL TRANSMISSION)

10 TRANSMISSION #2

(RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

15

[FIG.9]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

20 TRANSMISSION #2

(RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

25

[FIG.10]

HS-PDSCH RECEPTION POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

TRANSMISSION #2

(RETRANSMISSION)

TRANSMISSION #3

5 (RETRANSMISSION)

TIME

[FIG.11]

ACK/NACK SIGNAL

10 CQI SIGNAL

PACKET TRANSMISSION CONTROL SIGNAL

301 TRANSMISSION DESTINATION DETERMINING SECTION

TO BUFFER 152

302 MCS DETERMINING SECTION

15 TO MODULATION SECTION 153

306 IR GAIN DETERMINING SECTION

303 TRANSMIT POWER DETERMINING SECTION

TO TRANSMIT POWER CONTROL SECTION 154

304 HS-SCCH SIGNAL GENERATION SECTION

20 TO AMPLIFICATION SECTION 161

[FIG.12]

IR TYPE H-ARQ

CC TYPE H-ARQ

25 IR GAIN

[FIG.13]

RETRANSMISSION PACKET

IR GAIN

TRANSMISSION #2
TRANSMISSION #3
TRANSMISSION #4
TRANSMISSION #5
5 TRANSMISSION #6

[FIG.14]

HS-PDSCH TRANSMIT POWER
TRANSMISSION #1
10 (INITIAL TRANSMISSION)
TRANSMISSION #2
(RETRANSMISSION)
TRANSMISSION #3
(RETRANSMISSION)
15 TIME

[FIG.15]

ACK/NACK SIGNAL
CQI SIGNAL
20 PACKET TRANSMISSION CONTROL SIGNAL
301 TRANSMISSION DESTINATION DETERMINING SECTION
TO BUFFER 152
302 MCS DETERMINING SECTION
TO MODULATION SECTION 153
25 305 CQI DIFFERENCE CALCULATION SECTION
303 TRANSMIT POWER DETERMINING SECTION
TO TRANSMIT POWER CONTROL SECTION 154
306 IR GAIN DETERMINING SECTION

304 HS-SCCH SIGNAL GENERATION SECTION
TO AMPLIFICATION SECTION 161

[FIG.16]

5 HS-PDSCH TRANSMIT POWER
TRANSMISSION #1
(INITIAL TRANSMISSION)
TRANSMISSION #2
(RETRANSMISSION)
10 TRANSMISSION #3
(RETRANSMISSION)
TIME

[FIG.17]

15 HS-PDSCH RECEPTION POWER
TRANSMISSION #1
(INITIAL TRANSMISSION)
TRANSMISSION #2
(RETRANSMISSION)
20 TRANSMISSION #3
(RETRANSMISSION)
TIME

[FIG.18]

25 ACK/NACK SIGNAL
CQI SIGNAL
PACKET TRANSMISSION CONTROL SIGNAL
301 TRANSMISSION DESTINATION DETERMINING SECTION

TO BUFFER 152

302 MCS DETERMINING SECTION

TO MODULATION SECTION 153

306 IR GAIN DETERMINING SECTION

5 303 TRANSMIT POWER DETERMINING SECTION

TO TRANSMIT POWER CONTROL SECTION 154

304 HS-SCCH SIGNAL GENERATION SECTION

TO AMPLIFICATION SECTION 161

10 [FIG.19A]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

TRANSMISSION #2

15 (RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

20 [FIG.19B]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

(INITIAL TRANSMISSION)

TRANSMISSION #2

25 (RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

TIME

[FIG.19C]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

5 (INITIAL TRANSMISSION)

TRANSMISSION #2

(RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

10 TIME

[FIG.19D]

HS-PDSCH TRANSMIT POWER

TRANSMISSION #1

15 (INITIAL TRANSMISSION)

TRANSMISSION #2

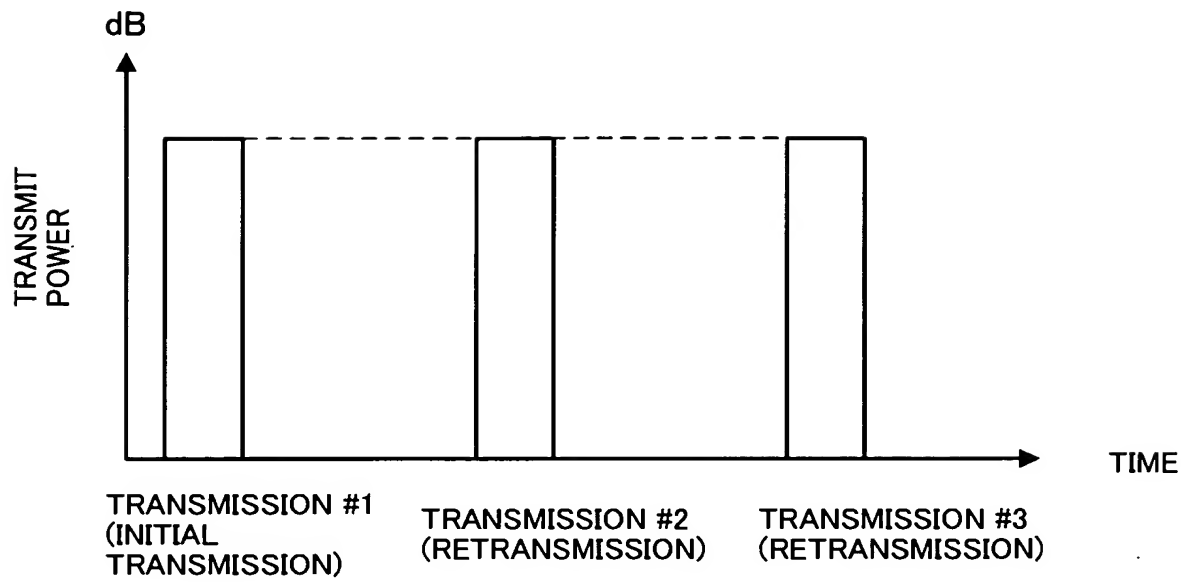
(RETRANSMISSION)

TRANSMISSION #3

(RETRANSMISSION)

20 TIME

1/16



PRIOR ART
FIG.1

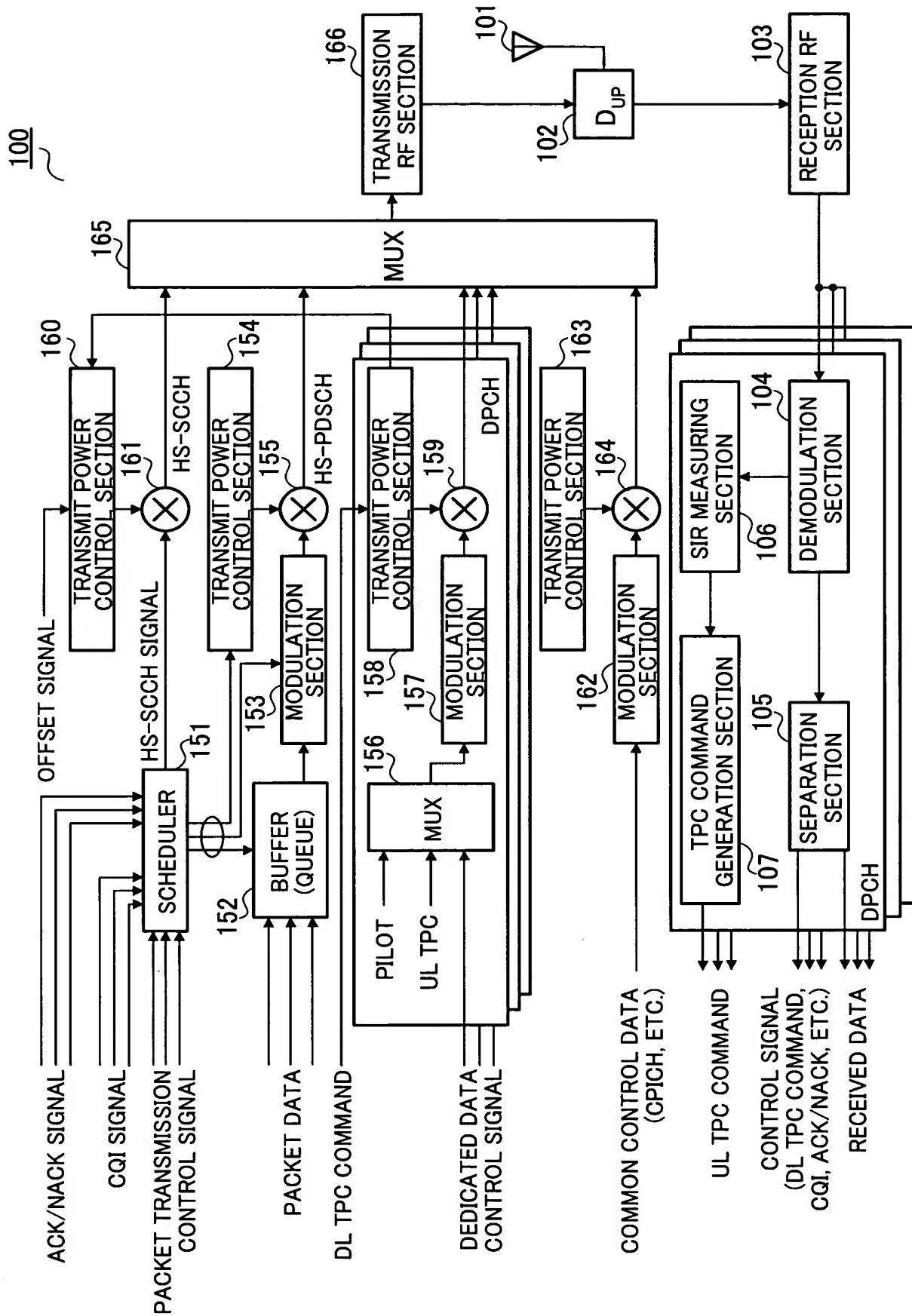


FIG. 2

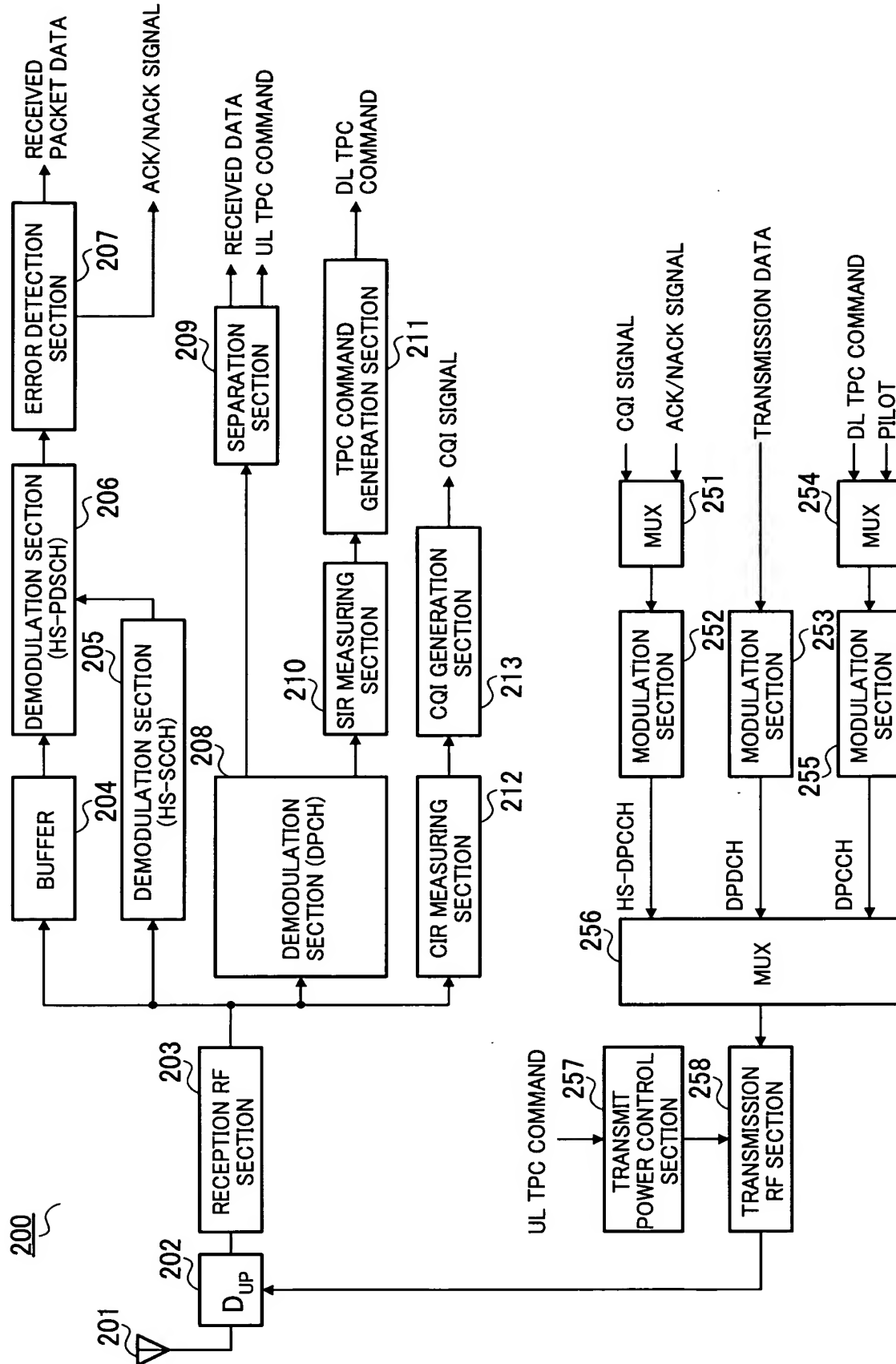


FIG.3

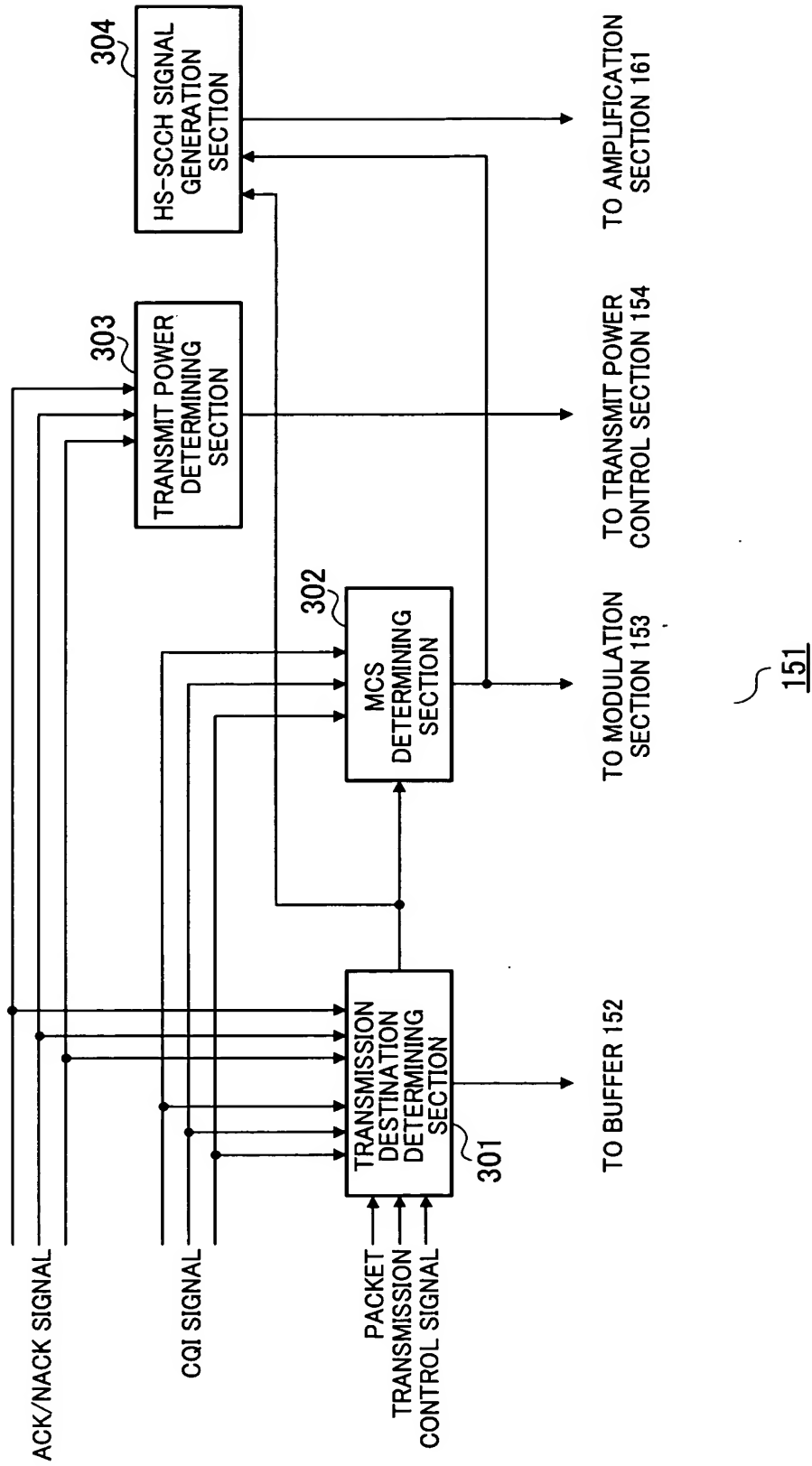


FIG.4

5/16

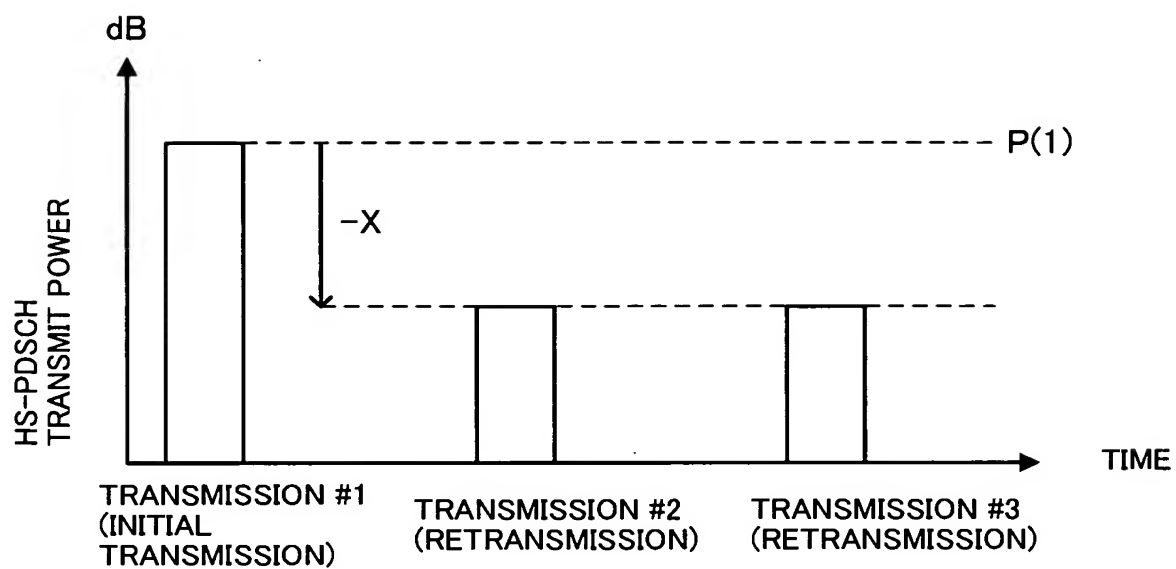


FIG. 5

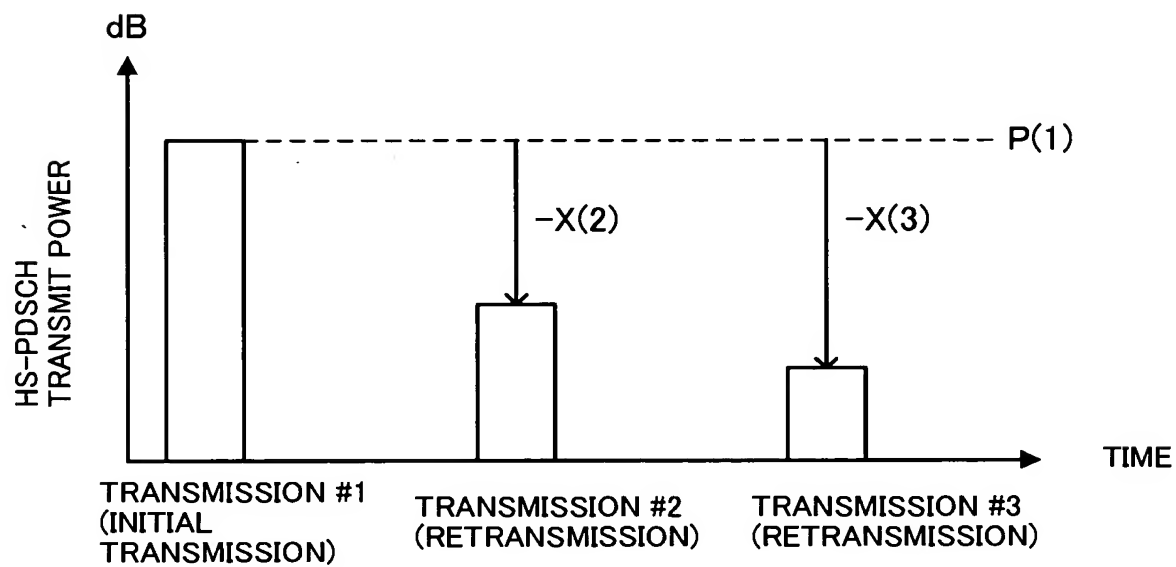
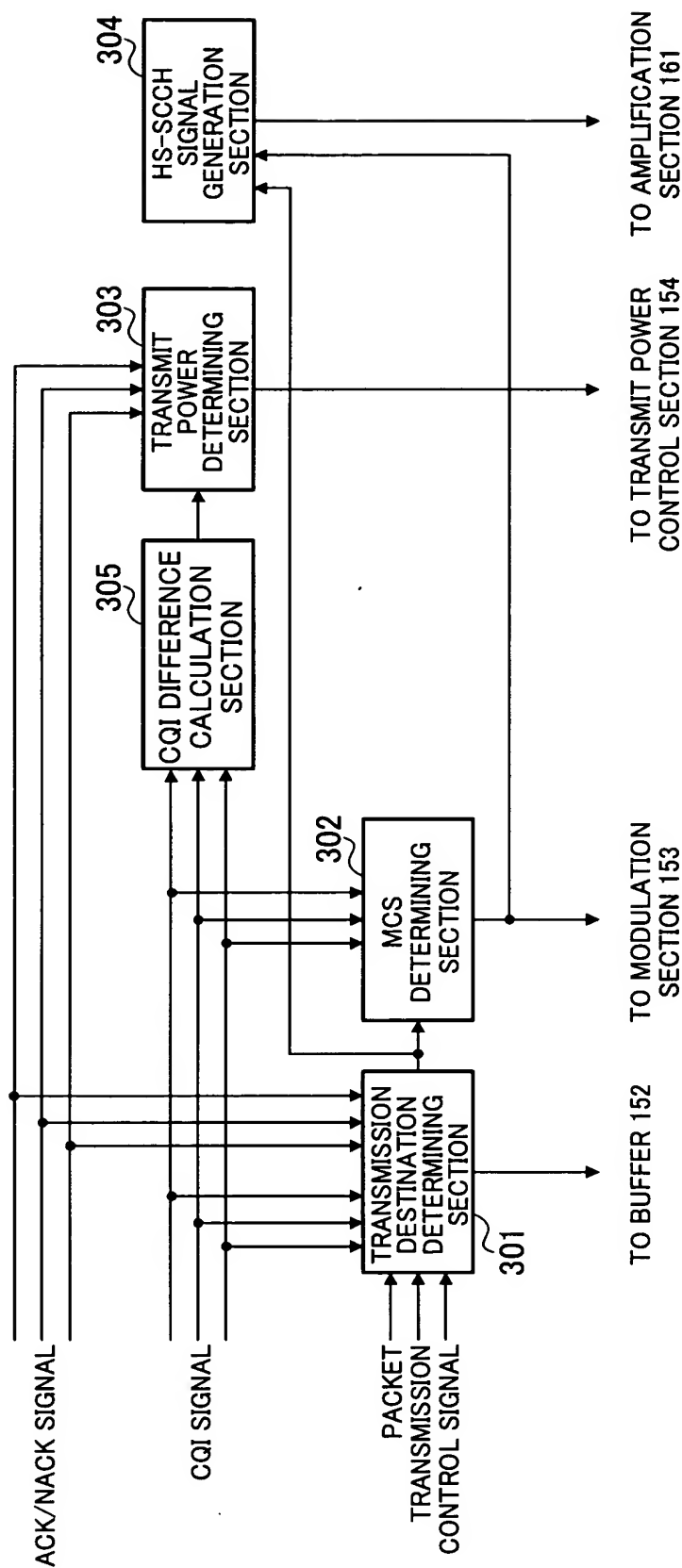


FIG. 6



151

FIG.7

7/16

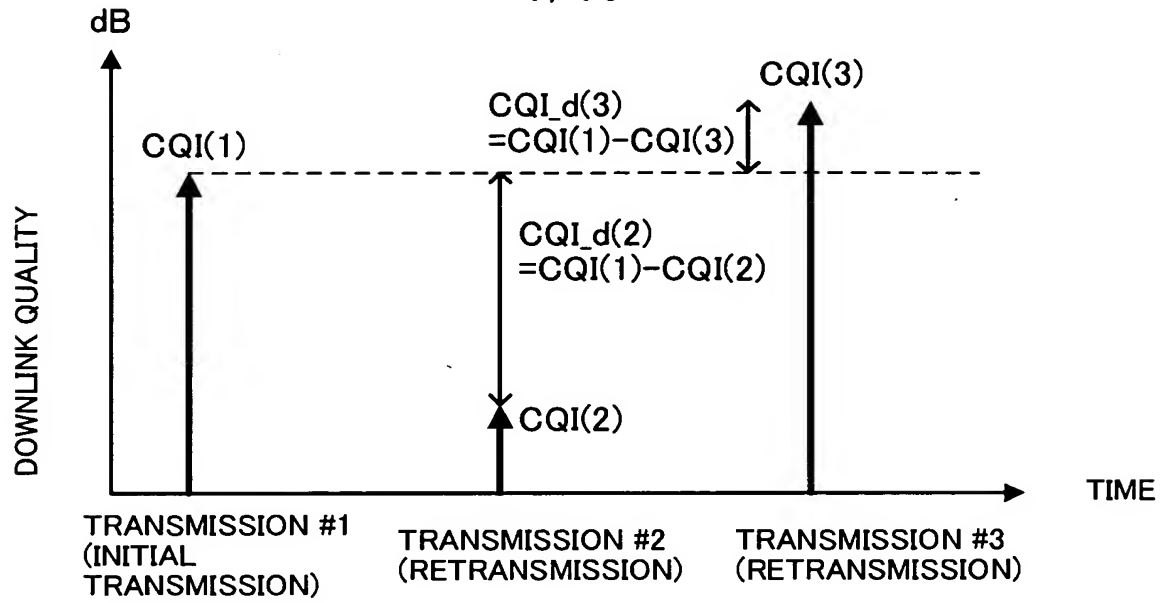


FIG. 8

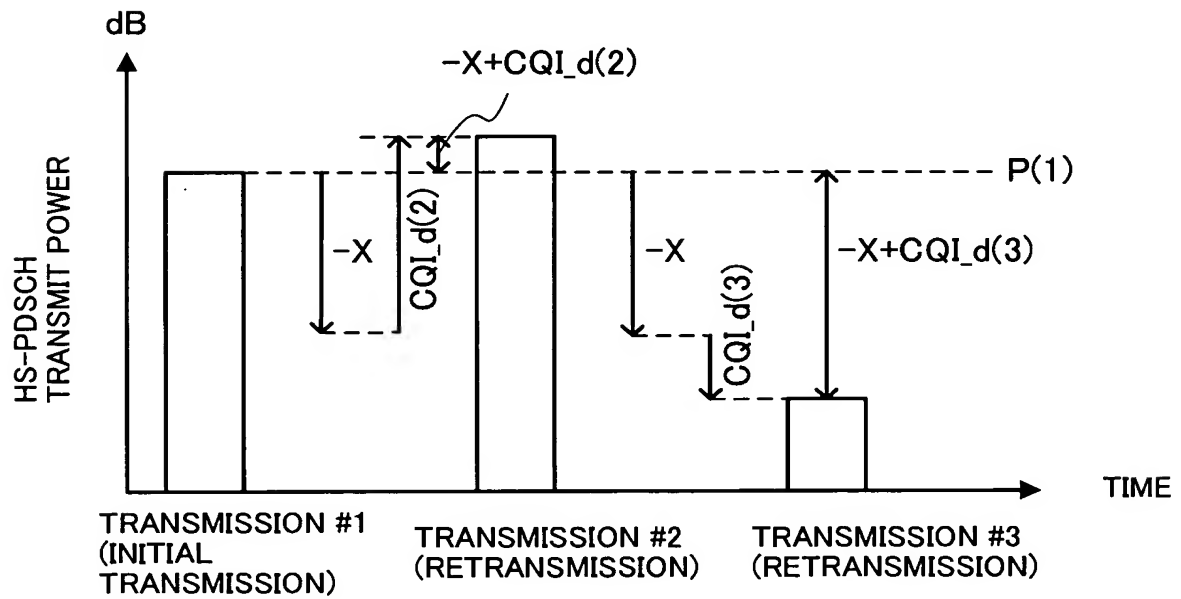


FIG. 9

8/16

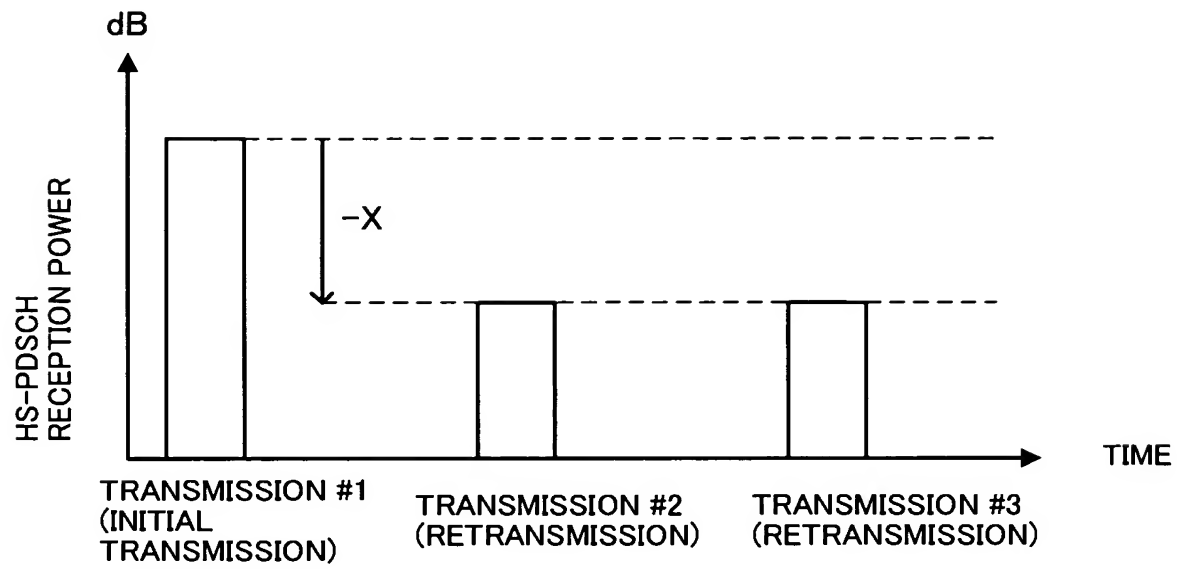
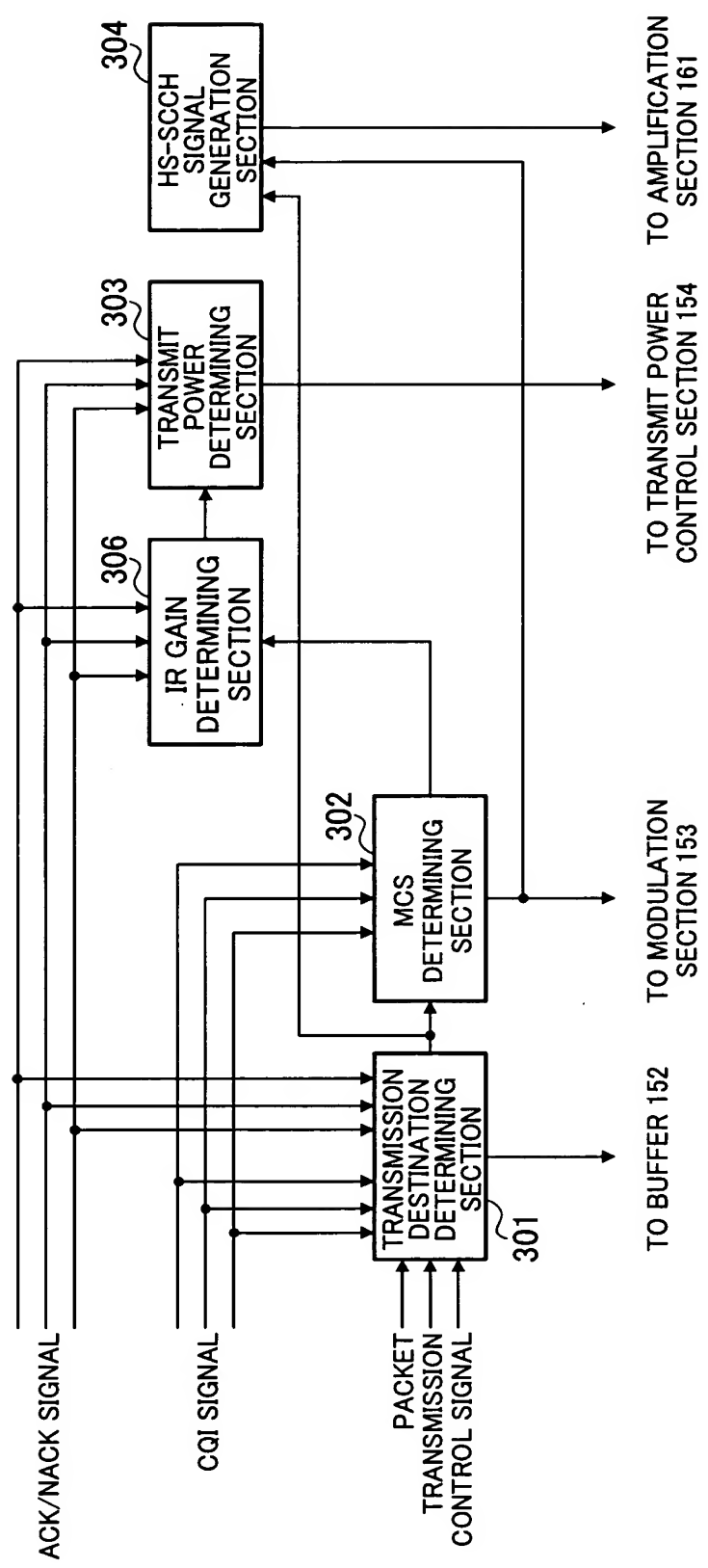


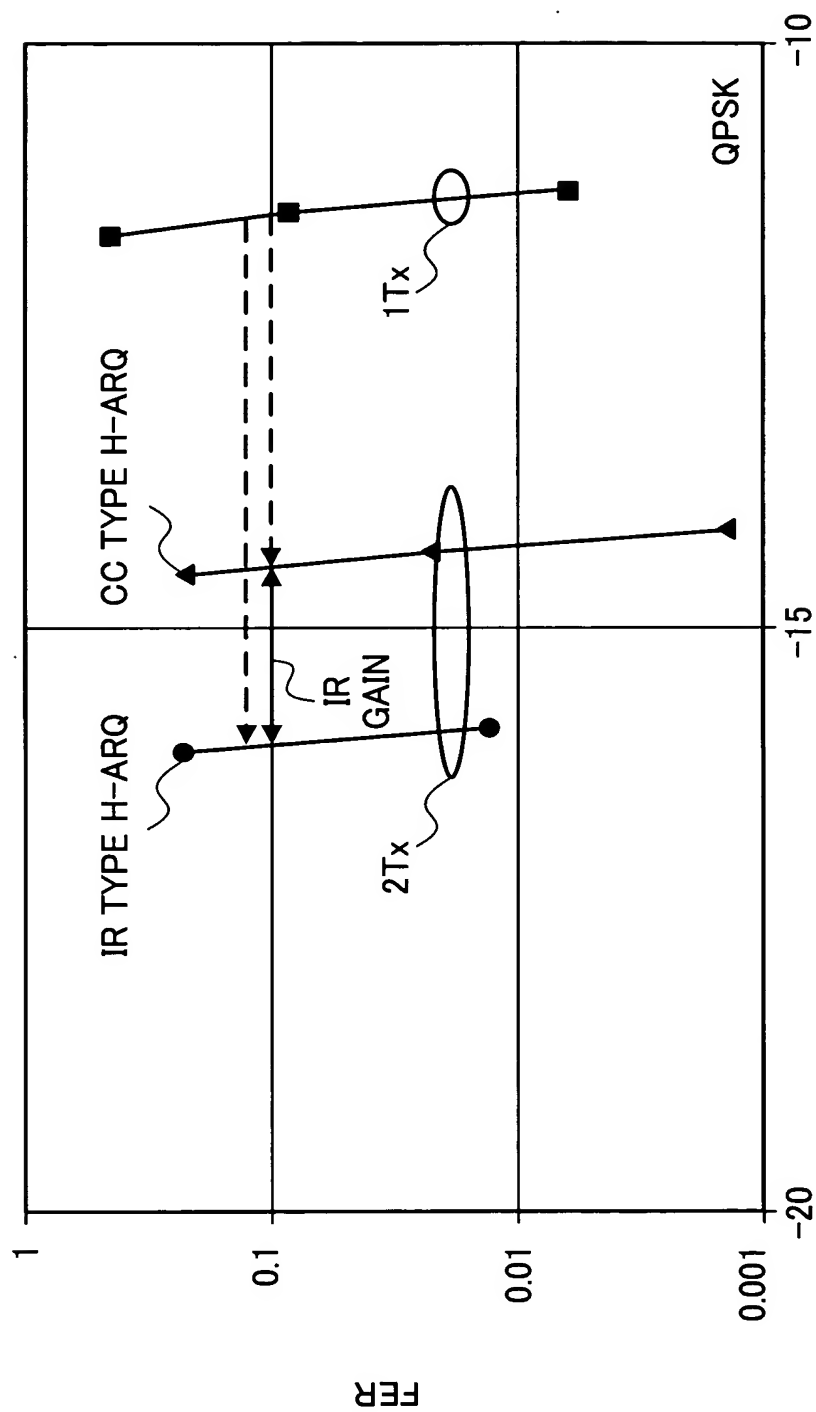
FIG.10



151

FIG.11

10/16



SIR per Transmission [dB]

FIG.12

11/16

QPSK

RETRANSMISSION PACKET	IR GAIN
TRANSMISSION #2	$Y(2)=2[\text{dB}]$
TRANSMISSION #3	$Y(3)=4[\text{dB}]$
TRANSMISSION #4	$Y(4)=6[\text{dB}]$
TRANSMISSION #5	$Y(5)=6[\text{dB}]$
TRANSMISSION #6	$Y(6)=6[\text{dB}]$

⋮

FIG.13

12/16

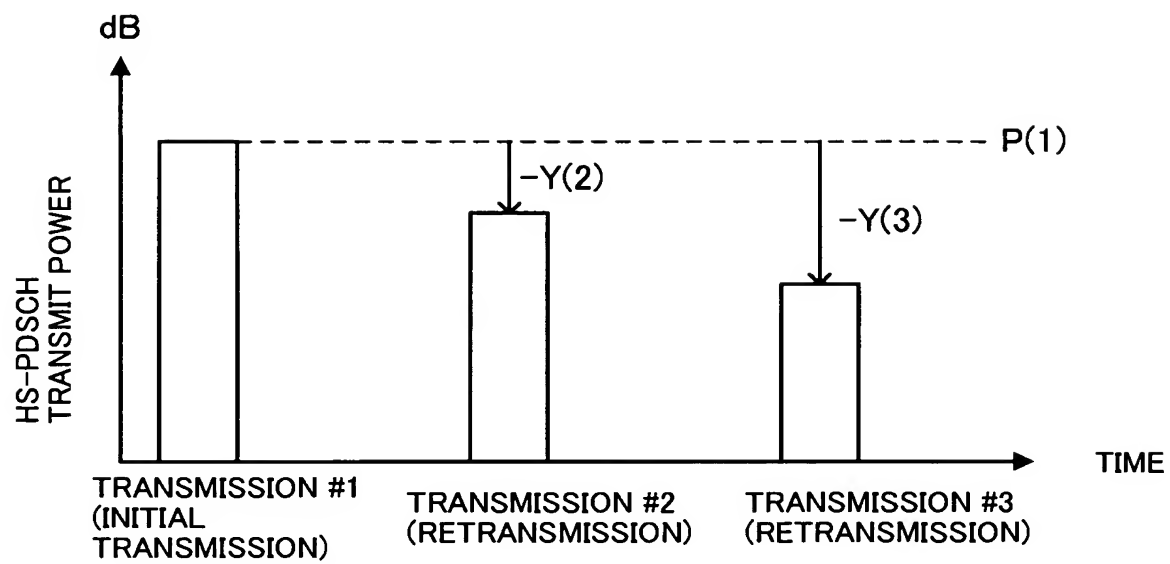
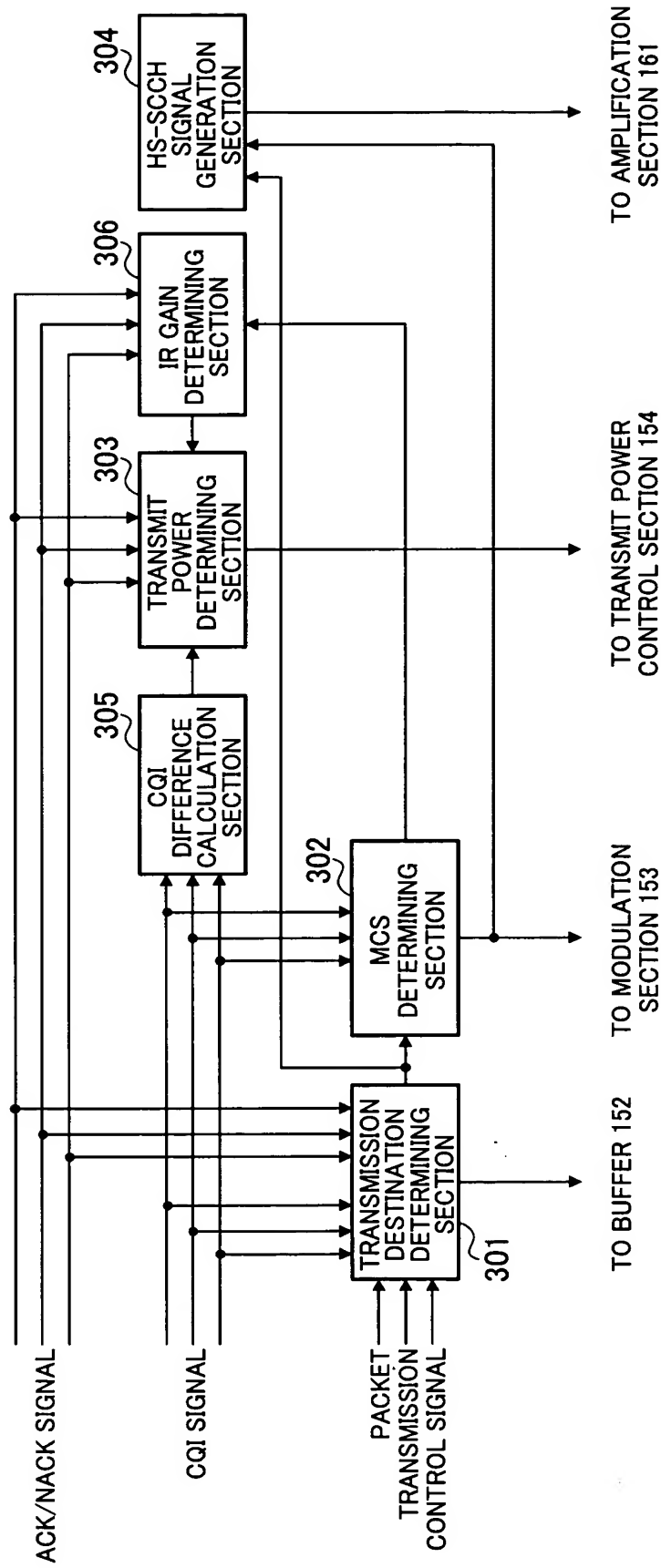


FIG.14



151

FIG.15

14/16

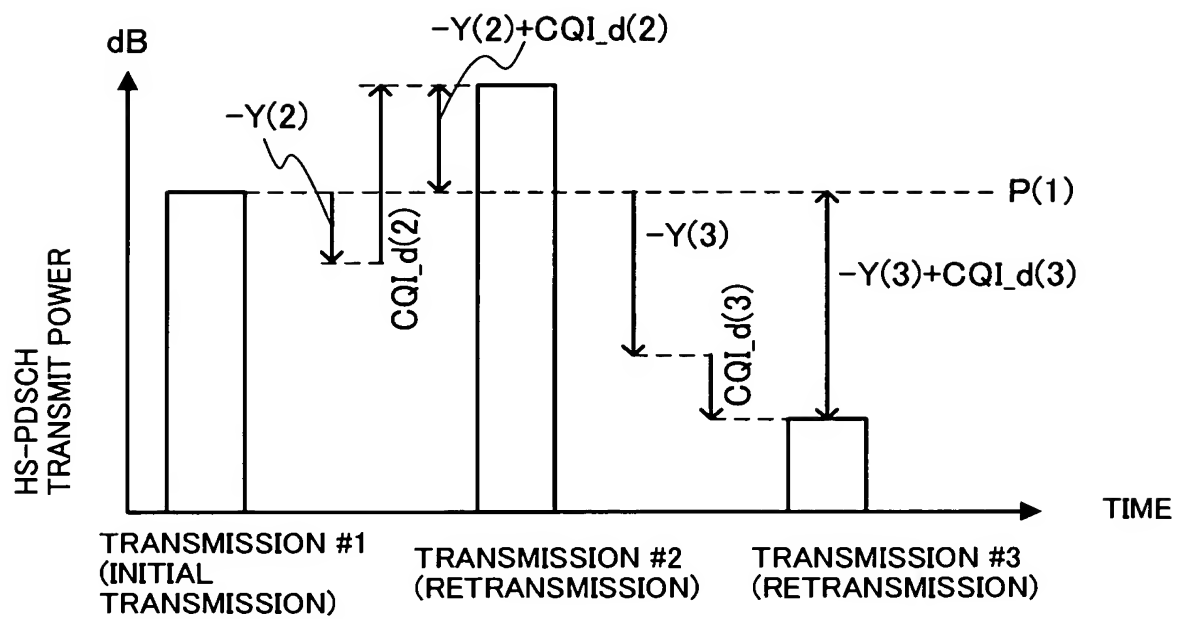


FIG. 16

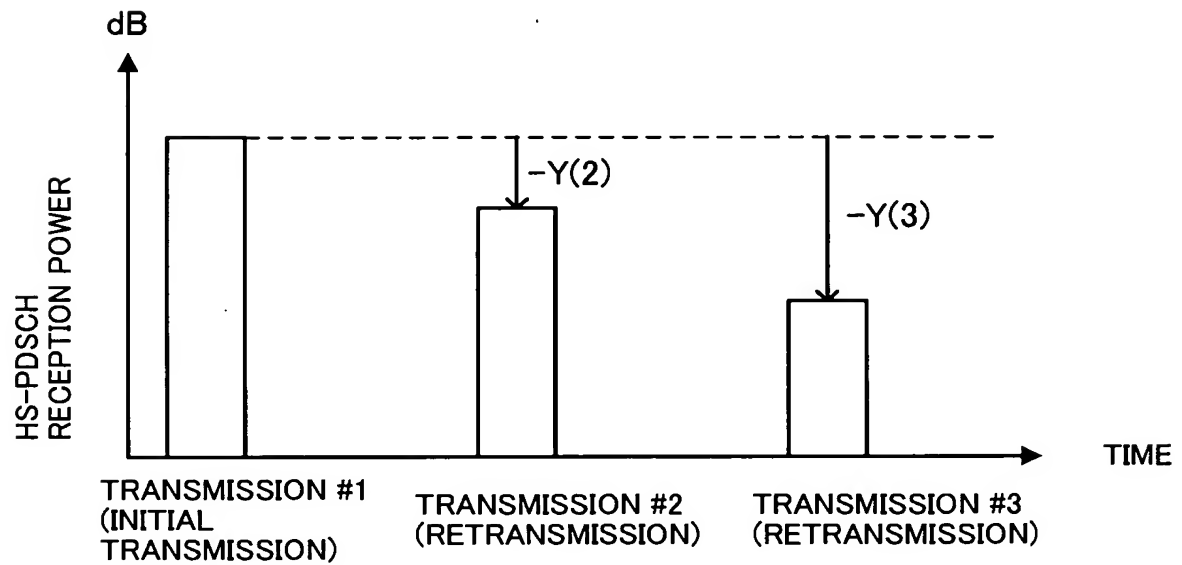
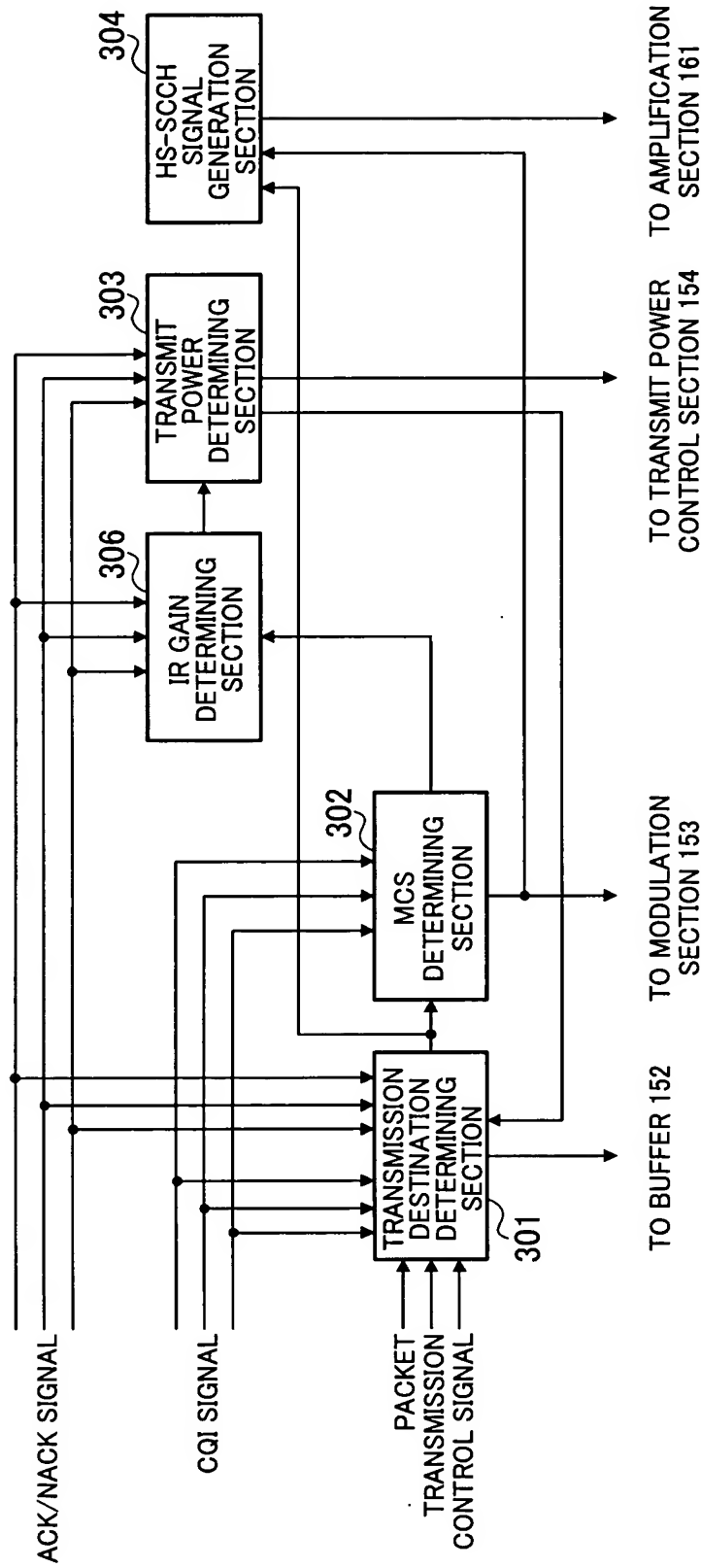


FIG. 17



151

FIG.18

FIG.19A

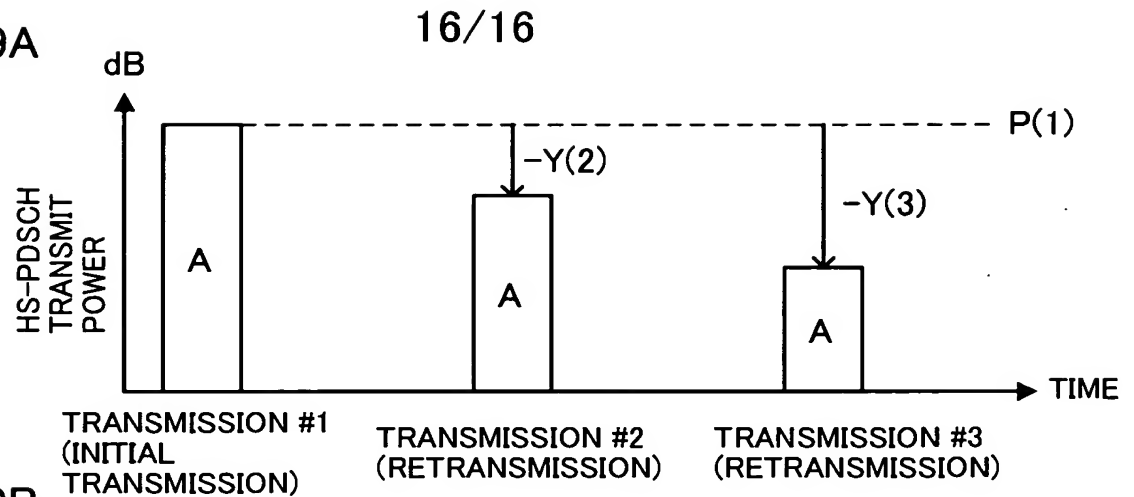


FIG.19B

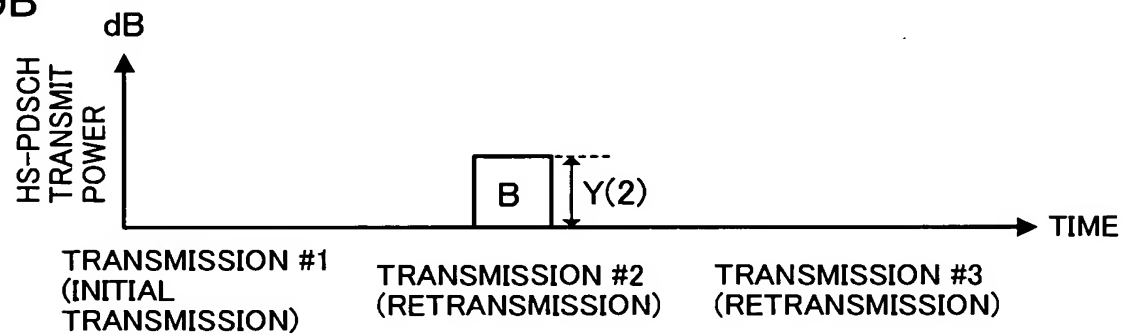


FIG.19C

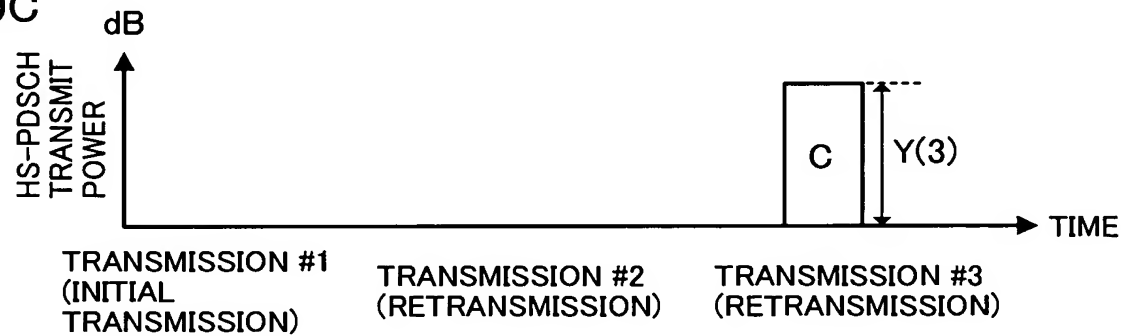


FIG.19D

